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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Giora Kornblau

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04/22/2010

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EXAMINER

VANORE, DAVID A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,963	Applicant(s) KORNBLAU ET AL.	
	Examiner DAVID A. VANORE	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 26, 27, 34 and 37-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-13, 15, 26, 27, 34 and 37-40 is/are rejected.
- 7) ☒ Claim(s) 14 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/30/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 4, 2010 have been fully considered but they are not persuasive.
2. Applicant's arguments against the application of Wainer et al. at page 9 distinguish the uses of the Wainer et al. apparatus against the use or functioning of the claimed apparatus. This argument is not persuasive because claim 1 and the claims which depend upon claim 1 define an apparatus. In view of MPEP 2113-2115, the method of operation of a claimed apparatus does not distinguish the claimed apparatus from the prior art apparatus and its structure. Since all the required structural elements appear present, and the arguments are directed towards function rather than structure, the rejection is maintained.
3. The Applicant further states that Wainer produces a map of a distribution of radioactivity in three dimensions. Applicant also notes at page 9 that the shape and size of the source of radioactivity is determined. Since a three dimensional volume is composed of a plurality of planes, and a three dimensional map is a plot charting the constituents of the volume, Wainer et al. does appear to collect both a composite of planar information including plural planes in which a radiation source is located.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7, 11-13, 15, 34, and 37-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by USPN 6,696,686 to Wainer et al.

6. Regarding claim 1, 3-4, and 34, Wainer et al. teaches a computerized tracking system including first, second, and third sensor modules (Item 20) which include pixilated arrays for detector regions (Col. 1 Lines 34-58) and a computer coupled to each sensor (Note Col. 4 Lines 56-62).

7. Regarding claims 2 and 15, the radiation source is a radio-isotope contained in a portion of a patient body attached to the device (Col. 1 Lines 10-19).

8. Regarding claims 5 and 37-39, the apparatus of Wainer et al. includes a means to selectively tilt or translate each detector surface to a desired angular orientation with respect to the source/patient (Col. 4 Lines 63-68).

9. Regarding claim 7, the computer of Wainer et al. constructs an image out of the detected data and therefore includes an imaging module (Col. 5).

10. Regarding claims 11-12, the computer receives data from each pixel of the pixilated detector which satisfies the requirement to have 2, 3, or more output signals coupled to the computer system. These claims have been amended to include the requirement that the signals contain information defining planes and that the computer computes a linear intersection of the planes. These limitations added are not further structural features. The structure recited in the claims previously remains and stands rejected.

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11. Claim 13 fails to further limit the structure of claim 12 and is rejected on the same grounds. The addition of the term "configured to" does not impart a structure. The CPU is a computer which performs calculation. The recitation that the computer is configured to compute does not impart a further structural requirement because the act of computing is a function of the computer, as is the manner of computation.

12. Claims 26 and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by USPN 4,193,689 to Reymond et al.

13. Regarding claims 26 and 27, Reymond teaches a method of radiation source location where a source of ionizing radiation such as a laser is observed by three unit sensor. The first, second, and third unit sensors detect first, second, and third planes of location of the source, from which the intersection of these planes is calculated to reveal a position of a radiation source (Col. 3 Lines 55-68).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wainer et al. cited above in view of USPN 6,033,721 to Nassuphis.

16. Wainer et al. teaches all the required limitations of claim 5, but fails to teach explicitly that the computer controls the translation of the detectors described in Wainer et al.

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17. Nassuphis teaches a control system including a motion control system and image processor (Note Fig. 1 and its associated discussion in the specification) which are operably contained in the same computer control unit.

18. Nassuphis remedies the lack of teaching in Wainer et al. by providing an integrated computer control system which performs image processing and component motion control operations.

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Nassuphis and Wainer et al. invention because the use of a central computer to perform the control and operation of an imaging device would be an obvious use of convention components and the components of Wainer et al. Computers are advantageously employed in the prior art as an interface and control system for complex devices enabling both device control and data processing to be conducted on a single platform.

20. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wainer et al. cited above in view of USPN 4,755,680 to Logan.

21. Wainer et al. teaches the required elements of claims 1 and 7, but fails to explicitly disclose that the computer which generates the image using data acquired includes a display. The Wainer et al. device is used in mammography where the radiation source is in a tissue under test attached to the device.

22. Logan teaches a SPECT apparatus including a computer for generating an image which includes a display device (Fig. 1, Items 41 and 43 respectively).

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23. Logan cures the deficiency of Wainer et al. by showing that the inclusion of a display with an image processor coupled to radiation detectors is conventional and functions to enable an operator to observe the detected and processed information.

24. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a display with the computer element of Wainer et al. because display systems such as monitors, LCD displays, CRT displays, and the like are conventional computer components used for visualizing the operation of the computer element and enabling ease of control and operation.

25. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wainer et al. cited above.

26. Claim 40 further requires a fourth sensor module and a method of calculating a radiation source based on four sensor module outputs. Wainer et al. teaches up to three sensor modules as pointed out above.

27. The addition of a further sensor module is a duplication of a further sensor module already disclosed in Wainer et al.

28. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a further sensor module because Wainer et al. teaches the addition of more than two sensor modules to increase the number of detectors for more effectively mapping a three dimensional volume containing a radiation source.

Additionally, it has been held that duplicating an element that is disclosed in the prior art is an obvious modification of the prior art where no new and unexpected result is produced. In the instant case, adding a fourth sensor module provides an additional

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detector, which provides further detected information as the second and third sensor modules of Wainer et al.

Claim Objections

29. Claims 13 and 38-39 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The recites the operation mode of the computer, not a further structural feature of the apparatus.

Similarly, in claims 38-39, the limitations recited are directed to the manner of operation of the device. For example, in claim 38, the displacement mechanism tracking a radiation source and changing detection boundaries to keep a source in a boundary is the manner in which the displacement mechanism is caused to function. There is not a further structural element recited in the claim.

Allowable Subject Matter

30. Claims 14 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID A. VANORE whose telephone number is (571)272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David A Vanore/
Primary Examiner, Art Unit 2881